

Remarks/Arguments

The Office Action of October 8, 2003 and the references cited therein have been carefully studied and reviewed, and in view of the foregoing Amendment and following representations, reconsideration is respectfully requested.

The specification has been amended to correct minor errors.

Claims 1 and 4 have been amended so as to even more clearly patentably distinguish the present invention over the references to Nakahara et al. (USP (5,442,163), Holbrooks (USP 6,167,322), Ohsawa et al. (USP 5,645,391) and Thomas et al. (USP 6,116,848).

More specifically, each of amended claims 1 and 4 now sets forth that the position sensors 31 are located on the base ends of the tines 27a of the fork arm 27, respectively. Accordingly, the sensors 31 enable the detection of the presence of a reticle at a given position relative to the tines (e.g., the ABNRM position shown in FIG. 3).

Nakahara et al. do teach a reticle transport and storage system comprising a fork arm 3, corresponding to that of Applicant's admitted prior art of FIG. 1. That is, the fork arm 3 comprises a base, and a plurality of tines extending from the base. However, as noted by the Examiner, Nakamura et al. do not teach position sensors disposed on the fork arm 3.

Holbrooks teaches embodiments (FIGS. 1- 7) of a wafer gripper comprising positioning/locating optics 107, as referred to by the Examiner in the Office Action.

The wafer gripper comprises a paddle 100 having a single tine on which a gripping finger 105 is mounted. The sensing optics 107 are not disposed on this tine but on a base of the paddle 100 from which the tine extends, so that the sensing optics can sense the edge of the wafer (col.9, lines 49 – 56).

Thus, Holbrooks does not suggest providing positioning/sensing optics 107 on the base ends of the tines of the fork arm 3 of Nakamura et al. At best, Holbrooks suggests providing positioning/sensing optics 107 on the base of the fork arm 3, i.e., at the portion of the fork arm analogous to that of the paddle 100.

And certainly, because the positioning/sensing optics 107 of Holbrooks are operative from a single location as shown in each of FIG. 1 and 6, there is no suggestion of Applicant's claimed plurality of position sensors disposed on the base ends of the tines of a fork arm, **respectively**.

In addition, Holbrooks discloses the use of optical sensors 130 also on the base of the paddle 100 of the embodiment of FIG. 6. These optical sensors 130 are "to aid in accurately measuring the size of wafer 122" (col. 9, lines 64 – 66 as noted by the Examiner). However, there is no need to measure the size of a reticle in reticle transfer systems of the type disclosed by Nakamura et al., as distinguished from wafer transport and processing systems of the type disclosed by Holbrooks. Thus, Applicant respectfully submits that there is no suggestion that would have motivated one of ordinary skill in the art to have modified the fork arm 3 of Nakamura et al. in view of the teachings of the size-measuring sensors 130 of Holbrooks. And again, seeing that

the measuring sensors 130 are provided on the base of the paddle 100 in Holbrooks, there is nothing that from the teachings of Holbrooks that would suggest mounting measuring sensors 130 to each of the tines of the fork arm 3 of Nakamura et al.

It must also be noted that Holbrooks discloses embodiments of a wafer gripper comprising a fork arm (embodiments of FIGS. 9 and 11). However, Holbrooks does not disclose any position sensors for these embodiments. That is, given the chance to teach the location of positioning/sensing optics on a fork arm (embodiments of FIGS. 9 and 11), Holbrooks fails to do so. Thus, this portion of the Holbrooks disclosure fully supports Applicant's main contention that there is no suggestion in Holbrooks of providing position sensors on the base ends of the tines of the fork arm of Nakamura et al.


Finally, it is noted that the above-described limitations now provided in claims 1 and 4 were originally basically presented in claims 3 and 6, which claims were not rejected based on the Thomas et al. and Ohsawa et al. references. Neither of these references teaches or otherwise suggests providing position sensors on the base ends of the tines of the fork arm of Nakamura et al. Thus, further discussion of these references is not seen to be necessary.

For these reasons, namely because of the differences between Applicant's invention, as is now claimed, and the references, including the lack of suggestion in the references of a fork arm of a reticle transfer system wherein position sensors are disposed on the base ends of the tines of the fork arm, respectively, to enable the

detection of the presence of a reticle at a given position relative to the tines of the fork arm, it is seen that the references do not render obvious the subject matter of Applicant's amended claims when such subject matter is considered as a whole and the references are considered for what they actually suggest. Accordingly, early reconsideration and allowance of the claims are respectfully requested.

Respectfully submitted,
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